

REMARKS

Claims 8 and 9 are presented for examination, having been added, and Claims 1-7 having been canceled, without prejudice or disclaimer of subject matter. Only Claim 8 is in independent form. In addition, various changes have been made to the specification, to address the objections made in the Office Action, as well as to improve the form in other respects. Favorable reconsideration is requested.

Applicants submit herewith corrected drawings for Figs. 1 - 4, which have been labeled "prior art".

Applicants note the statement in the Office Action that the certified copy of the priority document has not been received. In fact, a Claim To Priority and a certified copy of the priority document for this application were filed on May 14, 1999, as evidenced by the returned receipt postcard bearing the stamp of the Patent and Trademark Office, a copy of which is attached hereto. Applicants respectfully request acknowledgment of the claim for foreign priority and of receipt of the certified copy.

Claim 7 was rejected under 35 U.S.C. § 112, second paragraph, as indefinite, and Claims 1-7 were rejected under 35 U.S.C. § 103(a) as being obvious from admitted prior art in view of U.S. Patent 3,845,295 (Williams et al.).

Cancellation of Claims 1-7 renders the rejections of those claims moot.

As is described in more detail in the present application, certain types of charge-coupled devices (CCDs) used as image pickup devices can, under certain circumstances, suffer from the drawback that a channel becomes unable to carry off all the charge of a portion of the pickup device, resulting both in an inaccurate output, and in the retention of the charge in the semiconductor region that accumulates the photocharge, with

the result that the next exposure also is inaccurate. The present application is directed to a structure for avoiding these problems.

Independent Claim 8 is directed to a solid-state image pickup element formed on a single semiconductor substrate, comprising a pixel, including a photoelectric conversion element which includes an accumulation area where signal charge generated by photoelectric conversion is accumulated, a transfer switch which transfers the signal charge accumulated in said accumulation area, a floating diffusion portion which receives the signal charge through the transfer switch, and a reset switch which resets an electric potential of the floating diffusion portion. A first and a second terminal receive a voltage supplied from outside the solid-state image pickup element, and a first and a second wiring supply the voltage supplied to said first and second terminals, respectively, to the reset switch and to the transfer switch.

Among other important features of the structure defined in independent Claim 8, is that the first and second terminals and wirings supply voltages from outside to a reset switch of the floating diffusion portion and the transfer switch, respectively. At the least, this feature of Claim 8 is not taught by the prior art.

First, it is believed to be clear that this feature is not taught or suggested by the admitted prior art, and therefore that Claim 8 is allowable over the admitted prior art taken alone.

Williams relates to a radiation sensing circuit with charge skim-off, in which a radiation sensing circuit includes a photoelectric conversion element 10, a transfer gate 16 and a reset gate 22 (see Fig. 1). As shown in Fig. 6, the electric potentials of those gates may be controlled to read out a photoelectric signal charge from the photoelectric

conversion element. However, nothing has been found, or pointed out, in *Williams*, that would teach or suggest the manner of control recited in Claim 8, in particular, the supply of voltage from outside the solid-state image pickup element. Applicants urge that *Williams* fails to teach the recited first and second terminals and first and second wirings. Even if this patent is combined with the admitted prior art (and even assuming such combination would even be proper), the result would not meet the terms of Claim 8. Accordingly, that claim is believed to be clearly allowable over the admitted prior art and *Williams*, taken separately or in any proper combination, if any.

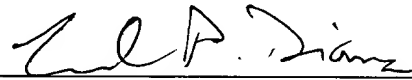
A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as a reference against independent Claim 8, and that claim is therefore believed patentable over the art of record.

The other claim in this application is dependent from Claim 8, and is therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of Claim 9 on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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In re Application of:

Docket No. 03500.013389.

TETSUNOBU KOCHI ET AL.

Appln. No.: 09/264,719

Examiner: Dorothy Wu

Filed: March 9, 1999

Group Art Unit: 2697

For: SOLID STATE IMAGE PICKUP APPARATUS

Date: April 15, 2003

THE COMMISSIONER FOR PATENTS
Washington, D.C. 20231

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Technology Center 2600

Sir:

Transmitted herewith is an Amendment in the above-identified application.

☒ No additional fee is required.

The fee has been calculated as shown below

CLAIMS AS AMENDED						
	(2) CLAIMS REMAINING AFTER AMENDMENT		(4) HIGHEST NO. PREVIOUSLY PAID FOR	(5) PRESENT EXTRA	RATE	ADDITIONAL FEE
TOTAL CLAIMS	* 2	MINUS	** 20	= 0	x \$9 \$18	\$0.00
INDEP. CLAIMS	* 1	MINUS	*** 3	= 0	x \$42 \$84	\$0.00
Fee for Multiple Dependent claims \$140°/\$280						\$0.00
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT---						\$0.00

- * If the entry in Column 2 is less than the entry in Column 4, write "0" in Column 5.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, write "20" in this space.
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, write "3" in this space.

☐ °Verified Statement claiming small entity status is enclosed, if not filed previously.

☐ A check in the amount of \$____ is enclosed.

☐ Charge \$____ to Deposit Account No. 06-1205. A duplicate copy of this sheet is enclosed.

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☐ A check in the amount of \$____ to cover the Extension fee for response with a ____-month extension is enclosed.

☐ A check in the amount of \$____ to cover the Information Disclosure Statement fee is enclosed.

☒ Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100 or by facsimile at (212) 218-2200. All correspondence should continue to be directed to our address given below.



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